



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,799	11/20/2001	Sheng-Guo Wang		1612

7590 07/30/2004

Dr. Sheng-Guo Wang
2516 Radrick Ln
Charlotte, NC 28262

EXAMINER

HOFFMANN, JOHN M

ART UNIT	PAPER NUMBER
----------	--------------

1731

DATE MAILED: 07/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/989,799

Applicant(s)

WANG, SHENG-GUO

Examiner

John Hoffmann

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 0604.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 6, 11, 16, and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed. 12-15, 17-19
- 6) ☒ Claim(s) 1-5, 7-10 and 12-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-5, 7-10, 12-15 and 17-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 It is unclear what is meant by “diameter/shape” – it is unclear if it requires both, or either of the two. There is no antecedent basis for “the measured outer diameter/shape data”: as per claim 2, the term data is followed by “are” which indicates that the term is indeed in its plural form (more than one datum). But there is no requirement in claim 1 that more than one measurement/datum is taken. Therefore it is unclear if there must be more than one measurement.

Claim 3, line 3 refers to “either” one: but then three things are listed. The word “either” indicates only two. It is unclear what is suppose to be claimed. One suggestion is to use the following language: “wherein the control process controls at least one member of the group consisting of: a feeding speed control..., a drawing speed control..., and a tension....”

Claim 4 there is no antecedent basis for “the heating and melting device”. The claim also refers to drawing and providing steps (and maybe others) it is unclear if they refer to the drawing and providing of claim 1, or if they require additional drawing and providing steps.

Claim 5: lines 6-7 refers to "the measurement data"; it is impossible to infer if such refers to the data of claim 1, or the data of claim 5, line 4. Also, there is no antecedent basis for "their respective preselected outer diameters".

Claim 7 is simply not understood. Line 5 refers to "after" heating that the fiber is coated "while" drawing. However, line 3 requires that drawing is "while" the heating and melting is done. It is not understood how the drawing and be both after the heating/melting and "while" it is being heated. Alternatively: there is confusing antecedent basis for the "drawing" of line 5: it is unclear as to whether it is the same as the drawing of line 3 or if it is an additional drawing step. Furthermore, it is unclear if the heating and melting of lines 3 and 5 are the same heating and melting as that of line 2, or if they are additional steps of heating and melting. Line 6 there is no antecedent basis for "the outer diameter" and "said coating stage". It is unclear what is "called" the outer diameter. Line 7: it is unclear if the coating can be the same coating as that of line 5. There is no antecedent basis for "the robustly fine quality" and "the key quality".

The other claims have similar problems. Applicant is REQUIRED to correct all such problems.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 7-8 and 10 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Harding 4793840.

All of the limitations are clearly taught – except for those of the last paragraph of claim 7. As to it being “robustly controlled” and “high performance” and “high quality”. It is clear that the Harding process is controlled robust enough, with high enough performance and high enough quality to suit the Harding purpose. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Claim 10: The Harding method is directed to continuously measuring the diameter of the fiber. It is measured at a location that is close to the melter and close to the coater (because it is closer than the moon – the claims do not indicate how close “close” is) Thus there are multiple outer diameters being measured. Any of the diameters can be the outer diameter data of the bare fiber. And any of the rest of the diameters can be the final outer diameter. It is noted that it appears that Applicant intends to claim two different sets of outer diameters – however, the claim does not provide much or any difference between the two diameters being used. In other words, the claims are very broad and read on only one diameter measurement device.

Claims 12-13, 17 and 19 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Urruit 5551967.

See col. 4, lines 33-67. The first measurement is made just after furnace 50, the second measurement is made just prior to coater 56. The process is of sufficiently high robustness to satisfy Urruit.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pilkington 2238536.

Claim 1 "diameter/shape" is being interpreted as "diameter or shape". It is unclear if Pilkington teaches a step of measuring the outermost diameter. However, from page 3, lines 13-14, 25-31, and page 7, lines 1-8 (which teach stretching the preform to correct variations in diameter of the preform P) it would have been obvious to measure the outer diameter at various locations so that one will know the amount of stretching to apply at the locations.

Pilkington also does not disclose heating and melting to draw the fiber. Rather Pilkington just teaches drawing the fiber (page 2, 2nd to last paragraph, page 7, last paragraph). It would have been obvious to heat and melt the preform, because it is the only way to draw a fiber from a preform. If the glass is pulled without heating it to a ductile state, the glass will just shatter.

Pilkington also does not teach using a control system. It would have been obvious to have an automated system perform the Pilkington method, so as to reduce human error. It is well settled that that is not "invention" to broadly provide a mechanical or automatic means to replace manual activity. *In re Venner*, 120 USPQ 192 (CCPA 1958); *In re Rundell*, 18 CCPA 1290, 48 F.2d 958, 9 USPQ 220.

As to it being "robustly controlled" and "high performance" and "high quality". It is clear that the Pilkington process is controlled robust enough, with high enough performance and high enough quality to suit the Pilkington purpose. Alternatively: the claim is directed to what "will" happen; there is no indication as to what is presently required by the method. What "will" happen is deemed to be an intended use function which does not require any manipulative difference. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Claim 2: there is no indication as to whether the measurement is on-line or off-line. It would have been obvious to do it either way – because those are the only possible times to do it: before or during the stretching. It cannot be done after the stretching because the outer diameter of the preform will no longer exist at that time. As to the data handling, again, either it must be fed directly to the apparatus or it must be stored and used later. One cannot use the data before it is created.

Claim 3 refers to feeding the data to the system “to control the process”. The phrase “to control the process” reasonably signifies an intention. Whereas, such a phrase can also reasonably convey a result, the Office interprets claims with their broadest reasonable interpretation. Presently, the expression of an intended result creates a broader claim than would the expression of an actual result. Therefore the Office interprets this claim using the broadest meaning, namely the claim requires the intention of a result. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). IN other words, when one looks at the Pilkington process, one cannot tell what was the intention of the feeding of the data. It is only the manipulative step: “to control...” is merely an intention that is in the artisan’s mind which is not something which can be covered by a patent.

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pilkington as applied to claim 1 above, and further in view of Harding 4793840 or Urruti 5551967.

Pilkington discloses the invention as claimed, except for the drawing of a fiber. Urruti and Harding disclosed improved methods of drawing fibers from a preform. It would have been obvious to improve the Pilkington process by using the Urruti or the Harding process to draw the fiber, for the advantages taught in Urruti and Harding.

Claim 5 : as to the fiber being "within a small percentage" It would have been obvious to have any shrinkage to be as small as possible – because one wants the measurements to be as accurate as possible. It is noted that glass does not normally shrink.

As to the drawing being controlled based on the measurement data, etc., such is inherent. The Pilkington preform was created based on the measurement data. And the fiber draw rate is based on the preform. In other words, everything is "based on" everything that was done before – it surely cannot be based on what was not done. Whereas the control might not be the same as the specific control that applicant used, the claims are not limited to the specific embodiment that applicant used.

Claims 7, 9 12, 14-15 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pilkington in view of Harding 4793840 or Urruti 5551967.

See how the references are applied above. IT is noted that all of the claimed results are: (1) written as an intended result – with no corresponding manipulative steps which result in the intended result, and (2) express only relative results – but give no indication as to relative to what. For example “high quality” depends upon the application. And what was high quality 20 years ago is different from what will be high quality 10 years in the future.

Furthermore, as indicated above, the claims are indefinite. If any of the limitations are not adequately addressed above, it is because Examiner could not understand the limitations. For example, claim 19, lines 7-8: it is not stated what is “in view” of shrinkage.

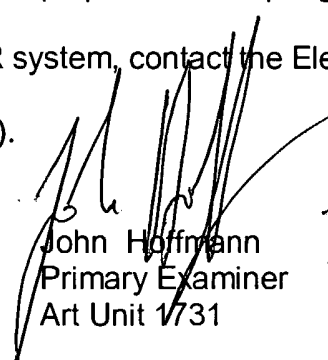
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ruba, Gansicke, Kenmochi are cited as showing other two diameter measurement techniques.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John Hoffmann
Primary Examiner
Art Unit 1731

7-27-04

jmh